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ABSTRACT

This paper outlines the assumptions about the work and working conditions of teachers evident in various practices of action research in education. First, a thorough analysis of documents from the period of action research in the post-World War II era in the United States is presented. Images of the work and workplace of teaching from this period begin to establish patterns to be pursued in looking at later work. The second section begins with an examination of the writings of Lawrence Stenhouse whose thoughts on the teacher-as-researcher have been influential in the development of action research, especially in the United Kingdom and Australia. The section concludes with a discussion of projects conducted in Australia, the United Kingdom, and the United States in the late 1970s and early 1980s. Finally, issues in action research related to the work and workplace of teachers are identified, and their implications for current action research practices are discussed. (JD)

Action Research and the Work of Teachers

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> The right intellectual attitude is, of course, not the sole factor in good teaching. A good will toward children, philanthropic devotion to the work, the zeal for perfection that animates the true artist or craftsman and the personal qualities which work subtly by the force of imitation are also important. (Thorndike, 1906, p. 257)
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> The prophecies of evil effects from the feminization of the teaching staff of elementary and secondary schools that have been made have not been verified by the facts...It is likely that the world loses more by the absence from motherhood of women teachers who might otherwise marry than by the absence from the teaching profession of the men who would have their places. (Thorndike, 1912, p. 158-159)

Over the past fifteen years, action research has become a frequent partner to discussions of the improvement of teaching and teacher education. Yet there has been very little examination of the diversity of visions of action research, especially in relation to views on the nature of teachers' work and workplace. Various members of the action research "family" carry with them implicit conceptions of the nature of teaching and the place of action research in it. For example, some advocates see the central concern for action research in the development and diffusion of an adequate "knowledge base" for the establishment of teaching as a "profession". For others, the focal point is "empowerment", part of a movement toward a more decentralized system of educational decision-making and responsibility. For still others, the outcome of action research is to be seen in terms of personal fulfillment in one's work. The intent of action research as seen by a growing number of proponents is to be part of an effort to connect the work of teachers to issues of social, economic, and political change considered as embedded in the practices of teaching.

Much is heard today of issues of teacher autonomy, professionalism, empowerment, and emancipation. Along with these have come a myriad of projects proposals, and reports dealing with school-based management, new methods for teacher evaluation, and plans for restructuring, both schools and teacher

education. For example, in the current United States context, the role of the teacher and, in fact, the functioning of the schools in relationship to the economic, political and social structures are much contested. A reconstruction of the development of action research in terms of its relationship to the teachers' work and workplace will be helpful to judgments about the potentials of various forms of action research, both for teacher preparation and for in-service educational efforts.

This paper outl nes the assumptions about the work and working conditions of teachers evident in various practices of action research in education. First, a thorough analysis of documents from the period of action research in the post-world war II era in the U.S. is presented. Images of the work and workplace of teaching from this period begin to establish patterns to be pursued in looking at later works. The second section begins with an examination of the writings of Lawrence Stenhouse. His thoughts on the teacher-as-researcher have been influential in the development of action research, especially in the U.K. and in Australia. The section concludes with a discussion of projects conducted in Australia, the U.K., and in the U.S. in the late 1970's and early 1980's. Finally, issues related to the work and workplace of teachers in action research are identified and their implications for current action research practices are discussed.

Much of action research takes place not in large, federally or foundation-funded or university related projects. Rather, its traditions are deeply ingrained in the work of committed teachers, whose "audiences" have not, until very recently (See Wood, 1989) been those of academic publishing. The focus in this paper, though, is on the former types of projects. The major emphasis for comparison and analysis in the second section of the paper is on the earliest

phase of the "revival" of action research in education: the works of Lawrence Stenhouse and the Ford Teaching Project in the U.K. (e.g. Stenhouse, 1975; Elliott, 1976-1977), the Interactive Research and Development projects in the U.S. (e.g. Jacullo-Noto, 1984; Griffin, et al., 1983), and on the Action Research in Curriculum work at Deakin University in Australia (e.g. Kemmis & McTaggart, 1982; Kemmis, et al., 1982). Because these writings are those about which the most information is readily available, they allow for a closer and broader examination not only of accounts of projects written by teachers, but also of the more conceptual arguments of the academic-based researchers who worked with them. Although often cited in more recent works, the actual assumptions and practices of both the action researchers of the 1950's and those of the late 1970's and early 1980's have rarely been subjected to thorough analysis. Much has developed since the years covered in these sections of the paper. In many cases, the views of those involved in these action research efforts have clearly developed and changed. Yet unless we understand what has transpired, we cannot adequately understand and evaluate present activities. This work and workplace history will help to identify those aspects which continue to affect and perplex action research work today.

It is important to remember that the conceptions of the work and workplace of teaching may vary greatly, as each context has a history in which these visions were constructed. The focus here is on how each helps us to understand the issues and debates related to teachers' work which have and continue to play a role in action research work. The final section of the paper discusses both the central workplace issues emergent from this study and identifies some aspects which have not been addressed. Taken together, these outline significant areas which ought to be addressed by action research advocates today.

Teacher as creative scientist: Early action research

Beginning with the earliest experiences with action research in education, there has been a pronounced interest in issues surrounding the work and workplace of teaching. Often a part of the discussion centered on teacher resistance to change. Cunningham and Miel, for example, saw the reasons for this as two-fold: "change may threaten status and security, and research requires time and effort. Unless reassurance can be given to insecure people, and time provided for work, the research program may be doomed to failure" (1947, p. 371).

Such concern with the psychological basis of resistance to change has been a recurrent aspect in many action research writings and is closely connected to the notion of action research for teachers as a form of social engineering for personnel development (See Noffke, 1989). The focus here is on the implications of that resistance for identifying definitions of the work of teaching that are seen as compatible with particular versions of action research. The second issue, that of the workplace, includes such factors as the time and effort requirements of action research, as well as the other structural features of schools, for example, power relations. Instead of focusing on the individual psychological aspects of involvement in action research, the emphasis, here, is on the social dimension, with the personal seen as a mediating factor between the work and workplace of teaching.

Horace Mann - Lincoln: The "democratic" teacher

In the work of the Horace Mann - Lincoln Institute, the vision of the role of the teacher seems, at first, difficult to work out. Mackenzie, discussing the teaching process as an issue for curriculum research, commented:

> In spite of the long history of schooling, there is little agreement as to what constitutes teaching. To some teachers it is primarily

> telling or informing and hearing or having pupils recite. Other teachers have a broader concept of arranging the environment so that students can secure the experiences needed to attain goals which both teacher and learner accept. (1947, p. 361)

While this statement seems non-committal, and advocacies for particular positions about teaching were rare in this literature, a clear image, nonetheless, emerges.

First, the teacher was not only a curriculum developer, but was the "key person in any program for curriculum development."

> No matter what may be the overall structure designed to improve the curriculum, the curriculum happens in the classroom. What happens is largely determined by the teacher. (Horace Mann-Lincoln Staff, 1948, p. 344)

Second, there was an assumption not only that "every teacher is a potential researcher" (Horace Mann-Lincoln Staff, 1948, p. 310), but that engaging in group research was a "must for good teaching" (Horace Mann Study Group, 1948, p. 113). In fact, teaching and research were almost seen as the same thing. After describing the process of research as a series of steps (define the problem, develop hypotheses, test, generalize), the Horace Mann Study Group commented:

> Probably most teachers take many or all of these steps without recognizing that they are researchers. Sometimes they take some of the steps without following through to completion. When teaching is organized and its entire potentiality realized, it comes close to being research. (1948, p. 108)

Although it was recognized that teachers did not necessarily share the vision of the teacher-as-researcher, the idea that good teaching had to be seen as a dynamic process rather than a set of specific competencies was emphasized in the writings of the Horace Mann-Lincoln group. Rucker and Pittman, school supervisors in a collaborative project in Springfield, Missouri commented:

> Classroom teachers do not generally consider educational research to be their function. However, they are constantly seeking to

> improve their teaching and in so doing are dealing with problems which are subjects for valuable research. (1949, p. 164)

Echoing the comment about teachers' influence on the curriculum, Caswell (1950) extended the view to describe good teaching:

> Most curriculum workers have come to recognize that the single most important influence on the curriculum is the teacher and the purposes that guide teachers are of critical importance in everything they do. In other words, good teaching is a process which never can be reduced to the relatively mechanical and routine application of a set of procedures. (p.441)

To at least one of the writers on action research within the Horace Mann-Lincoln projects (Hopkins, 1950), the vision of the teacher included not only the use of the action research process on their own teaching, but also in their classroom practices with children. This process was seen as essentially creating a "democracy" in the classroom, through the engagement of children in action research. Yet Hopkins saw this as a difficult task:

> They [the teachers] like the approach for themselves in studying their own problems, but unconscious emotional debris stymies their attempts to use it with children. (1950, p. 343)

This connection between a form of "democratic pedagogy" and action research by teachers, will again be seen in Corey's work.

There is a sense, too, that the characteristics seen by the Horace Mann-Lincoln Staff as desirable in students, a particular "personality type", would have also applied to the teachers who would be "molding" those young people. The "democratic person", created through education, was to be "socially sensitive", "cooperative", and "self-directing". Another characteristic of that person was "thinking". The "thinking" student, and, by implication, teacher, was:

> ...disciplined to define problems, to formulate plans for solving them, to check plans against relevant facts and values, and to act upon tentative conclusions based upon the best possible thinking about a problem. He understands tentative judgments, the critical

> importance of method, carrying thought into action, and the influence of different interests and value-orientations upon people's thought and action. (Goodson, 1946, p. 42)

Finally, that ideal personality was to also be "creative": to be one who could "...make novel and intelligent adjustments to situations...", who did not "act upon patterns of routine and repetition", and who could "synthesize elements of experience and express himself in various media of art and physical recreation". (p. 42). "Thinking" and "creative", as characteristics of the "democratic person", can also be seen as outlining a researcher's work, thereby creating a close connection between science and democracy.

Given this vision of teachers and their work, one wonders about the kind of workplace in which such activities could take place. The members of the Horace Mann Staff were not unaware of some of the constraints on their vision:

> Teachers often become conditioned by a cultural inbreeding that may follow a highly provincial pattern. Experiences conditioned largely by one school situation tend to generate professional mind-sets among teachers;...The minutiae that teachers must handle day after day contribute greatly to establishing mind-sets that result in crystallization. (Goodson, 1946, p. 45)

Yet they also saw such problems as a source of research topics: "These conditions of the locality need reconstruction, but at the same time they represent resources for educational experimentation" (p. 45).

Their interest in stimulating in teachers "a self-growth in their professional conceptions and attitudes" (Goodson, 1946, p. 46) was seen by the Horace Mann-Lincoln Staff to require several "administrative conditions necessary to successful field experimentation" (p. 50). In these "conditions", one can find in a definition of the type of workplace in which action research would be possible.

The first of these "administrative conditions" dealt with the issue of authority. A need was seen to balance local autonomy with the strong central control of a state education department or a federal agency. This was accomplished through the methods of science and through cooperation:

> ...authority for educational remaking should reside in experimental methods of problem defining, hypothesis projecting and testing and in cooperation that comes from full consultation among the personnel working at the different levels. (Goodson, 1946, p. 51)

Here, it is important to note that the "scientific method" was seen, as it had been since its origins in the "scientific movement" in education, as a way to use the "neutrality" of science to depoliticize the debate over the control of educational reform.

The other aspect of authority, that of cooperation, was related to the second "administrative condition" - that of dealing with resistances to change, both on the part of teachers and administrators and by the "public". The authors noted that: "In general, teachers and administrators are not prepared, either by their professional education or by experiences gained in ordinary school work, to participate in experimentation." (Goodson, 1946, p. 51). The solution to this problem lay, in part, with the development of an atmosphere for change, a position which was to be reiterated for the next decade: "Experimentation requires a high order of security that makes it possible for an individual to engage in objective analysis and self-criticism." (Goodson, 1946, p. 52). While the school personnel were involved in the exploration of the "group dynamics" that made such an atmosphere possible, the public view was to be addressed through yet another "engineering" mode. For "...the public that criticizes experimental ventures...", there was to be a "public relations" program. (Goodson, 1946, p. 51).

Related to both of these, was the third condition - that of coordination and communication both among central Horace Mann staff members and between central and school staffs. Here, the issue of communication, as in the case of authority, was resolved through consensus, an attempt to replace the individual autonomy of teachers with a socially determined agreement:

> The inadequacy of this typical pattern of providing teachers with almost a wholesale opportunity to develop their individual ideals within a compartment of the school program has become increasingly apparent, particularly during the past decade. Today, the profession realizes that a school fulfills its obligations when its staff develops a maximum consensus in regard to educational outlook and the way different teachers work with children and young people. (Goodson, 1946, p. 54)

This emphasis on consensus, on a unified vision of teaching, has a clear parallel with much of the recent work on "effective schools". It also can be seen as a frequent partner to action research efforts. The view of cooperation and consultation was not regarded as part of a "laissez-faire" approach to educational programs. Rather, like the work of Lewin and Lippitt which influenced it, the view is of a "democracy" based on the authority of science.

It should be noted that the Horace Mann-Lincoln staff was also concerned with the more material conditions of teachers' work, and the impact these had on the development of collaborative action research projects. They noted the importance of schools "providing budget appropriations allowing free time for teachers to engage in research, and develop policies which facilitate research and indicate an awareness of the significance of the research program." (Horace Mann-Lincoln Staff, 1948, pp. 309-310). Some autonomy and support, together with the insistence that "[t]eachers must have time to think together if group action in research is to be made possible" (Rucker & Pittman, 1949, p. 165),

were to become the most frequently heard "conditions" for the "success" of subsequent action research programs.

In the early efforts of the Horace Mann-Lincoln Institute, there is a clear vision of the teacher as curriculum developer, as a potential researcher, and as a model of the "democratic person" the Staff envisioned for children. They saw teaching as a dynamic process, embodying the principles of democracy, rather than a static set of specific competencies. While there is a strong sense of the need to change teachers to accomplish these visions, attention was also paid to the material and administrative conditions which would support such change. The "method of science" and the cooperative "group dynamic" were to structure the relations of authority and control in schools. To see how or if these ideals were approached, a closer look at Corey's work with the Horace Mann-Lincoln Institute is needed.

The teacher as educational investigator: Corey's contribution

A good way to understand the issues of work and workplace in the 1950's era of action research is to look at the work of Stephen Corey. More so than many educational "experts" writing about teachers, his works speak to a great understanding of and a sensitivity toward teachers and their work lives. The documents from these early action research projects show a major attempt to include the teachers' voices in the reports. Building from his idea that "action research represents little more than a refinement of a process every teacher goes through as he tries to improve" (1953a, pp. 94-95), Corey emphasized his own faith in the majority of teachers:

> The stereotype of teachers as people who can have the same year of experience for any number of consecutive years applies to a very small minority. Almost everyone occasionally tries out some new ideas that seem to him, at least, to have greater promise. And some sort of evidence is sought on which an estimate of the worth of continuing or modifying them, can be based. This is the essence of

> action research. It is not that some teachers experiment and others do not. Some teachers experiment more consciously and more carefully than others, and it is this careful and conscious experimentation that the administrator will want to encourage. (1953a, p. 95)

The faith embodied in these words was based in a particular vision of what it took to be "teachers who investigate what they do" (Corey, 1950, p. 131): both a "scientific" and a "creative" mind. His "scientific" teacher is described:

> Teachers can become increasingly exact and objective and scientific about what they do. Not scientific in the test tube, white-laboratory-coat sense, but in the sense that they (1) base their judgment as to what children need upon more careful observations of their behavior, (2) evolve teaching-learning situations to meet these needs from a better understanding of what children and their culture are like and the way boys and girls learn, and (3) test the consequences of their teaching by getting more dependable and appropriate evidence of the changes resulting from what appear to be more promising teaching procedures. (1954a, p. 208)

This rational vision was to be complemented by the creative side of teaching: "Their creativity leads them to promising new ideas and their scientific search for evidence helps them to keep one foot on the ground" (1950, p. 131). These characteristics clearly match the overall view of the Horace Mann-Lincoln Institute in which Corey worked. However, the conscious linking of science to democracy was absent.

Corey, like many others of his time, was concerned with the psychological effects of participation in action research, beginning from a central position that: "Most of us feel better when we begin to know, rather than having so often to hope or guess." (1954a, p. 211). Yet this does not seem to be a major concern, except in the sense that those feelings were connected to the ability to engage in scientific work. He felt the need for research, in part as a result of the larger social context:

> At the present time, when public inquiry into public education is common, the need is great for practical, action oriented research conducted in specific communities to test the worth of old or new practices and materials. (Corey, 1953b, p. 23)

Although the issue of context is evident in his work, far more salient is the feeling of deep commitment to creating educational research that was of direct benefit to teachers and, therefore, children. He sought a role for the teacher beyond that of "research consumer" (p. 22).

Almost all of Corey's works address the conditions necessary to the successful implementation of action research programs. These carry with them a vision of the workplace and can be grouped into three interrelated aspects, slightly different in focus from those "conditions" noted earlier by the Horace Mann Staff: the structure of teachers' work, the nature of administrative support, and the need for personal relationships among the members of the school staff.

In considering the structure of teachers' work in relation to action research, Corey included the issue of autonomy. It is important to remember that Corey saw action research as research on one's <u>own</u> practices, not on those of somecne else. As with Lewin, there was, therefore, a definite need to ensure that:

> ...the people whose practices might need to change were parties to the process of inquiry and experimentation that identified the problem, selected the changes in practice that appeared to be worth trying, and evaluated their effects when they were tried. (Corey, 1955, p. 168)

In addition to control within the research process, it is also clear that Corey saw teachers as needing to be involved in curricular decisions. Participation in research and decision-making, he felt, required changes in the structure of teacher's work:

> If classroom teachers are expected to study their activities and experiment with promising innovations, our current ideas of what they should do during the school day will need careful re-examination.
>
> When courses of study are prescribed and teachers are expected to follow directions and teach from textbooks or laboratory workbooks or manuals, they can meet one class after another, day after day, with few interruptions other than those needed to recover energy and relax. The situation is quite different when teachers are encouraged to conduct research to improve their classroom teaching. They will then need time during the regular school day to think, to plan, to gather and interpret data, to discover and create or bring together new resources needed for their experimentation, and to do the many other things that are involved in action research. (Corey, 1954b, p. 80)

The need for more time seems to be quite obvious. After all, research is a time-consuming process. What is significant in Corey's emphasis is that the resolution of this problem rested in administrative support and restructuring, not in having teachers add something to their work. He felt strongly that "when teachers are expected to do all these extras on their own time, while carrying a teaching load originally designed to consume all of their energy, little happens" (Corey, 1953a, p. 102). He commented early on that the school administration's attitudes needed to be changed toward "a conception of teaching that emphasizes the role of the teacher as an educational investigator" (Corey, 1950, p.131).

Although the need for time was in part to deal with data, it was also needed to build relationships among the researchers - to establish feelings of trust and safety through "free discussions" in "informal, relaxed situations" (Corey, 1950, p. 131). Corey emphasized:

> These discussions bring new and promising ideas into the open and develop and esprit de corps which makes the innovator feel less lonely...Discussions of professional problems are more likely to be creative and adventuresome if the participants know one another personally as well as professionally. (1953a, p. 91)

Two things stand out in these comments. First, there is a psychological aspect being addressed. Personal feelings of isolation are ameliorated by a group process. Yet the establishment of a "personal" relationship, not just that of a supportive fellow professional, is also seen as important to establishing the atmosphere of trust and safety which he saw as necessary to successful action research work:

> Differences of opinion between individuals who are professional acquaintances only are threatening because each person is often criticizing the only thing he knows about the other. When differences of opinion about educational theory or practice, or anything else, are expressed by persons who have had an opportunity to become acquainted personally and to like one another, the controversy does not threaten to sever the only bond holding these people together...If group work is to be maximally effective, people must know, trust, respect, and understand one another. (1953a, pp. 91-92)

Corey's emphasis on the importance of the personal in relationships within action research groups stands in contrast to some of the more recent efforts, with their focus on the development of "professional collegiality" (e.g. Tikunoff, et al., 1979b, pp. 412-414).

In the reports by the classroom teachers involved in the action research projects of the time, the same concerns that Corey raised were salient. Yet they also noted that participating in the research had definite effects, both in terms of their work and their attitudes toward it:

> Working together on a common problem tends to break down petty rivalries and to create a more professional attitude on the part of the teachers.
>
> Some of the teachers who are promoting self-directed activities in the classroom for the first time, have themselves become freer and more creative in their teaching...In some instances college theories have actually been put into action for the first time. (Carter, et al., 1954, pp.469-470)

It is important to remember that a significant aspect to the action research projects done during this time had to do with explorations of the

meaning of "democracy" in education. The reference above to "self-directed activities" was a common topic for exploration through action research, in many ways anticipating, though probably not influencing, the work of the Humanities or Ford Projects. In order for "self-direction" on the part of the students to be achieved, a particular vision of the role of the teacher was seen as necessary. This view can be seen through the writings by the "Basic Living" teachers in one of the cooperative research projects with which Corey worked (Cooperative Research..., 1950). Teachers of these classes defined the concept of teacher as "a friend, guide, and resource to help young people in solving some of their problems" (p. 443). The students, whose views were collected through a questionnaire, felt the role of the teacher in the classroom included being "just another person in the group". The teacher would:

> help in planning the group work, act as a counselor and supervisor, keep class under control, be a friend to all, participate in discussions only when needed, act as a leader of the group, and be understanding and like a mother to everyone. (Cooperative Research..., 1950, p. 463)

The ties between a particular form of "progressive education" and this vision of the role of the teacher as "facilitator" are clear. Yet one other factor stands out. Beside the valuing of personal relationships, there is, at least in this teacher-written part of the document, a strong sense that in teaching, too, the nurturing of trust and safety, ensured by the "teacher-mother", was vital.

The work of Corey and the teachers involved in the Cooperative Research project is interesting in that it shows that there can be significantly different views of the teacher operating through the various levels. In the view of the research staff person, the teacher was an investigator of educational practices. To the teachers themselves, there was a strong sense that the

teacher's role was one of friend, guide, and resource person. To the children who experienced that pedagogical view through their teachers, the most valued characteristics were those related to their care and nurturance.

In Corey's work, there is a strong position of faith in and advocacy for teachers. His analysis of the "conditions" favorable to the development of the teacher as experimenter, led him to recommend changes, not only in the teachers, but in their workplaces as well.

From teacher-researcher to teacher-learner: Taba and Shumsky

As earlier work has shown (Noffke, 1989), action research efforts after Corey became increasingly viewed more as a part of "inservice teacher education" (Wiles, 1953) or as a technique of supervision for relatively inexperienced teachers (Taba, Noel, & Marsh, 1955). There was a change, too, in the vision of the role of the teacher. Instead of the faith in teachers of the Horace Mann-Lincoln Institute Staff and Corey, there is a strong sense, especially in Taba's work, that action research functions not just to identify and solve educational problems, but also to address problems in the teachers:

> In addition to providing a starting point for beginning work, problem identification also serves to provide a diagnosis of the teacher, his skills, his level of perception, his attitudes towards children and toward teaching, and especially of his capacity to accept change in his ideas and methods. (Taba & Noel, 1957, p. 13)

The point is made several times, and clearly indicates the uses of the process of action research both for democratic and for "social engineering" intentions: "The focusing of the problem is also a process that produces new insights for the teachers, and offers an opportunity to re-educate teachers" (p. 15). By framing action research as "problem solving" in individual teachers, we lose sight of the larger social vision of the teachers' role, evident in the work of the Horace Mann staff and Corey. Instead, there is a focus on making teachers

more "productive", changing their "perspective", and initiating them into "research procedures" (Taba & Noel, 1957).

Yet the purpose of engaging in action research as a form of what was later to be called "staff development", did have a larger vision - one which tied science not to democracy but to professionalism. Through learning the "scientific method", teachers would gain a degree of autonomy. Action research was seen to make teachers

> more self-propelling, more independent of ready made answers. This occurs because the processes of action research are essentially scientific processes, which pave the road to reasoning scientifically about professional problems. (Taba & Noel, 1957, p. 54)

Taba recognized constraints to the realization of such autonomy for teachers in two ways. One had to do with the traditional view of the role of the teacher and other was the structure of the school environment:

> Changing these assumptions and beliefs is naturally threatening to teachers' security, especially because of the general educational tradition which puts the teacher in the role of "knowing", of "having the answers", rather than in the role of being an explorer and a student. If the immediate school climate is authoritarian, the threat implicit in initiating a questioning attitude toward teaching problems can be serious. (Taba & Noel, 1957, p. 20)

The changes required for the school environment in order for action research to take place, seem, for the most part to be those which would make teachers feel less "insecure" in dealing with "uncertainty", thereby allowing a newer teacher role to be "explored" (p. 53).

Yet there is sense in which Taba saw action research as connected to creating a more "democratic" workplace. While working for several years with a local school district, helping teachers to identify and solve problems, she also engaged the administrators in the process of supporting the teachers. The project reported changes related to the teachers' workplace. First,

administrators changed their position on the nature on their authority to rely more on "science": "Several who seemed rigid and autocratic gained a new democratic hue as they became skilled in more objective and dynamic leadership techniques" (Taba, Noel, & Marsh, 1955, p. 457). Second, there were better lines of communication, where less attention was paid to "authority roles" and more to a concern with "'who can do what' irrespective of their positions in the hierarchy of authority". This was seen to lead to a greater participation in various projects for curriculum renewal (p. 457).

Taba's view of the teacher included the image of someone in need of improvement through the use of problem identification and solving. This involved a definition of the teacher as a "student" of teaching problems. While it is clear that Taba saw research as part of the role of teachers, its function was, more visibly than in the work of the Horace Mann Staff and especially Corey, that of enhancing their professional skills. Instead of the concern with changing the work situation to allow for more research, Taba stressed the little cost and change necessary to such efforts (Taba, Noel, & Marsh, 1955, p. 458). Although there is mention of "democratic" means, these seem to be equated with "group dynamics" processes. Although Taba's writings show a clear concern with how the schools might address social problems, for example "racial prejudice" (Taba, 1957), the larger social vision guiding the action research work is unclear.

The emphasis in Taba's action research work seems to be on the teacher as a professional, who used the methods of science to improve practice. With Shumsky, the focus was clearly on the teacher as a self-aware individual, who used action research to develop her/himself. Shumsky's focus, therefore, was not on the external constraints to action research, caused by the conditions of

work, such as time or autonomy, as in Corey. Rather, he looked to notions of "inner conflict", between old and new ideas.

> The teacher, doing research in his own classroom does not see himself as an observer, but rather as a participant. Researching means that the teacher's way of teaching, his relations with pupils and subject matter are in transition. (Shumsky, 1962, p. 138)

Action research had become a matter of "personal significance" (Shumsky, 1958) rather than social. This, in turn, transformed the role of the teacher from that of a researcher, participating in the social production of knowledge, to that of individual learner about her/his own practice.

This change has several implications. First, it emphasizes the close relationship of the teacher to the classroom and to his/her own actions in it:

> Unlike the research worker who has a temporary and detached relation to the laboratory, the teacher-researcher is intimately involved with his laboratory-classroom. More than that, he is intensely aware of himself as a central, active agent in his field situation. (Shumsky & Mukerji, 1962, p. 84)

Second, it alters the role of the teacher as "knowledge producer". While Shumsky was looking for a role for teachers in research, other than that of "consumer", he rejected a focus on the production of knowledge by teachers, unless it was of "meaningful personal significance to the learner" (Shumsky, 1958, p. 25).

> Formulating the ultimate goal of action research as product or publication is dangerous. It may mean that teachers will overlook the importance of problems to them as persons, the impact on the hypothesis of their educational philosophy, or the relation between implementation and the quality of teaching. Personal and professional growth will not result from the experience of researching, if in that research only the rewards of producing are stressed. (Shumsky, 1959, p.197)

This emphasis, in turn, affects the methods for evaluating action research, stressing not its "findings", but its "educative process" (p. 196). The third implication of this vision of the teacher as learner is, therefore,

that such a learning process was seen to require a "teacher" - the "consultant" in the action research process:

> The teacher is a learner, one whose learnings are guided by the consultant.
>
> It may be extremely difficult for the teacher-researcher to understand the causes of his frustration, especially since he is emotionally involved in the situation. The consultant should help the teacher-researcher determine where the root of his difficulty lies. (Shumsky & Mukerji, 1962, p. 86)

The transformation of the teacher-researcher to the teacher-learner, seen through the works of Taba and Shumsky, has two important aspects. First, as with the use of the "method of science" to resolve issues of control and autonomy in education in general, the vision of teacher as professional or learner of professional skills (including those of research) also serves to de-politicize her/his actions. Second, rather than committed to social change, the teacher is committed to the classroom. Instead of focusing on collective efforts to effect changes with a particular, democratic vision in mind, the teachers focus on improving themselves, whether through the expansions of their professional competencies or through the resolution of their "inner conflicts". Clearly, Taba and Shumsky possessed a social vision and analysis which guided their work. It is clear, too, that this social vision, whether through the belief in the rationality of science or the need for "self-awareness", was removed from their action research work with teachers.

From this reconstruction of the work and workplace issues in the post-world war II U.S. action research efforts, a distinct change in views can be seen. Teachers, in the work of the Horace Mann-Lincoln Institute were potential researchers, key people in curriculum development. They were also models of the "democratic person", using the same principles with students as they employed

in their own practices. Teaching was thus seen as a "dynamic" rather than a "static" process, almost requiring group effort for success. For Corey, the teacher still played a major role in curriculum development beyond that of research consumer - as an "educational investigator". For at least some of the teachers and children who participated in the action research projects, the teacher was defined as a friend, a guide, and a resource - one who helps, counsels, and establishes order. The teacher also was an understanding "mother", nurturing the atmosphere of trust and safety in the classroom. Teaching was itself seen as almost the same as research, a process of experimentation and refinement of the natural efforts of teachers to improve their practices. As such, it required and embodied both "scientific" and "creative" efforts.

With Taba and Shumsky, there was still a recognition of the teacher as a kind of investigator, but one who focused more on his or her own improvement or self-development. The group effort, guided by social aims, was much less salient. The teacher, possessing a "questioning attitude", was an "explorer" and student of either children's learning problems or their own individual practices. Through this, in Taba's view, they became more productive and skillful, including skillful in research. For Shumsky, the teacher became more aware of him/herself as an "agent", not as a researcher involved in the social production of knowledge, but as one who seeks "personal significance" in his or her work, developing the self through action research.

The images of the workplace, reflected in the discussion of "conditions" or "constraints" leading to facilitation or resistance to action research efforts also changed. While those involved with the Horace Mann-Lincoln Institute did discuss the effects of "conditioned mind-sets" as obstacles to change, they attributed at least some of this to the nature of the workplace -

the constant dealing with "minutiae" that often was, and continues to be, a part of teachers work. Changing such mind-sets required changes in the administrative conditions of teachers' work. There was a call for more time for teachers, requiring both awareness of the significance of research efforts and the need for policy changes which would appropriate expenditures to support teachers. A major change was needed, too, in the authority structure of schools. A kind of democracy based in the authority of science would lead to a better balance between individual or local autonomy and the need for central coordination and control. This, in turn, could be seen to depoliticize the debate over reform efforts, substituting a program of "public relations".

Corey, too, was concerned with psychological factors affecting efforts for reform and change. Teachers needed to "know" rather than "guess" about the effectiveness of their work. They needed, as well, to feel trust, safety, and less alone in their efforts. His analysis of these needs included the context of public inquiry into education as an important factor, as well as aspects of the teachers' workplace. The resolutions of these problems, then, focused on two aspects: the need for personal relationships among those involved in change and the need for changes in the structure of teachers' work. Additional time from teachers alone would not produce changes. There was a need for greater teacher involvement in curricular decisions and administrative support, including financial, to allow for more time for teachers to think, plan, and gather data together.

The concern with teachers' insecurity and uncertainty played a role in Taba and Shumsky's work as well. Shumsky focused on the "inner conflicts" involved in teachers' "transition from old to new ideas", leading to an emphasis on internal rather than external aspects to the teachers' workplace. Rather than

seeking changes in the structures surrounding teachers' work as producers of knowledge, he stressed more psychological "rewards". Taba remained more concerned with issues of the teacher's workplace. Instead of seeking administrative support in the form of time, as had the Staff at the Horace Mann-Lincoln Institute, including Corey, she stressed the low cost of engaging in action research. Her focus, though, was still on the creation of a more "democratic workplace". The "traditional role of the teacher" in the structure of schooling was seen as in need of change from one of having a particular position in a hierarchy, to one based on professional competencies rather than status. Better communications and "the use of science to solve professional problems" would give teachers more autonomy, allowing them to work with administrators on change efforts. "Group dynamics" were thus an important aspect to establishing the "democracy of science".

The "Extended Professional": The "Man of Learning"

The analysis of the early action research efforts has revealed several key themes. First, there were changes in the definition of the teacher's work from one of social and political actor as well as potential researcher to one of individual professional struggling for self-improvement. Second, the workplace of the teacher involved in action research was one in which the allocation of resources and the issues of autonomy and control played important roles. Finally, how we the psychological needs of the teacher are regarded can be seen to be dependent, to some extent, on how one views the work and workplace of teaching. This section begins with an exploration of the role of the teacher and the nature of the workplace Lawrence Stenhouse's work. His writings represent the most fully elaborated view of this era, and have been influential

in development in action research both in the U.K. and in Australia. Next, the images of teachers and teaching, their work and workplace present in the work of the Ford Teaching Project, the Interactive Research and Development projects, and the Action Research in Curriculum work at Deakin University are overviewed. Through these, persistent issues in the work of teachers in action research will be identified.

Lawrence Stenhouse

The vision of the work and workplace of the teacher evident the writings of Lawrence Stenhouse forms a significant beginning point for understanding many of the subsequent efforts in action research, especially outside of the U.S. As in the works of the Horace Mann-Lincoln Institute, especially in those of Corey, Stenhouse's description is couched in the language of experimentation - the development of a science of education:

> The idea is that of an educational science in which each classroom is a laboratory, each teacher a member of the scientific community. There is, of course, no implication as to the origins of the proposal or hypothesis being tested. The originator may be a classroom teacher, a policy-maker or an educational research worker. The crucial point is that the proposal is not to be regarded as an unqualified recommendation but rather as a provisional specification claiming no more than to be worth putting to the test of practice. Such proposals claim to be intelligent rather than correct. (1975, p. 142)

This view of the teacher as part of a larger community of researchers is related to the notion of the teacher as an "extended professional". Stenhouse, drawing on the work of Eric Hoyle, identified several critical qualities:

> The commitment to systematic questioning of one's own teaching as a basis for development;
> The commitment and the skills to study one's own teaching;
> The concern to question and to test theory in practice by the use of those skills...
> In short, the outstanding characteristics of the exterded professional is a capacity for autonomous professional self-development through systematic self-study, through the study

> of the work of other teachers and through the testing of ideas by classroom research procedures. (1975, p. 144)

Yet Stenhouse's teacher was not only a practitioner of the scientific skills of teaching, he was also a possessor of other knowledge, the knowledge of the wider community:

> A teacher is a man of learning skilled in teaching. He is qualified by virtue of his education, and his training. He does not teach what he alone knows, letting his pupils in on secrets. On the contrary, his task is to help his pupils gain entry into a commonwealth of knowledge and skills, to hand on to them something which others already possess. (1975, p. 6)

Here, Stenhouse's definition of curriculum must be remembered. The process he describes is not the direct transmittal of cultural content through the teacher. Rather, curriculum outlines the teaching that takes place, within a set of principles designed to enable teachers to enact their responsibility for the education of the young. He elaborated:

> I take teaching to denote the strategies the school adopts to discharge this responsibility. Teaching is not merely instruction, but the systematic promotion of learning by whatever means...'Teaching strategy' hints at more of the planning of teaching and learning in the light of principles, and it seems to lay more weight on teacher judgment. It involves developing a policy and putting that policy into practice. (1975, p. 24)

Such a view of the role of the teacher and the process of teaching was couched in terms of what should occur, rather than what did, but Stenhouse was hopeful:

> ...curriculum research and development ought to belong to the teacher...I concede that it will require a generation of work, and if the majority of teachers - rather than only the enthusiastic few - are to possess this field of research, that the teacher's professional self-image and conditions of work will have to change. (1975, p. 142)

As in the earlier action research work, the issues of teacher's working conditions and the conditions for change play significant roles in Stenhouse's writings. The constraints on such change were seen as both psychological and

social (1975, p. 159). In talking about the "personality" of the teacher, Stenhouse commented that "Almost all schools and teachers are more authoritarian than they realize" (Stenhouse, in Elliott & Adelman, 1975, p. 2). This comment is related to his position that the "teacher as researcher" was most likely to work in an "open" classroom (Stenhouse, 1975, p. 155). It also is related to the concern Stenhouse showed for questions of "order" in the classroom.

In Stenhouse's work, in the Cooperative Research project of the 1950's in the U.S., as well as in some of the reports of the Ford Teaching Project, the IR & D projects, and those from Deakin University, there was considerable attention to the issue of "order" in classrooms. This might not seem noteworthy, given that it is an issue frequently seen as of vital concern to many classroom teachers. Yet Stenhouse, more so than any of the other writers about action research, devotes considerable attention to it, and analyzes the overall issue in terms of social theory (See, for example, 1975, pp. 46-51). Rather than a separate issue, that of "classroom management", his view, and that apparent in all but the IR & D projects, was that problems of "order" were "normal" occurrences that had to be seen in terms of their relationships with curriculum, pedagogy, and the larger social context, not as distinct research topics. Problems of "order" did, though, operate as constraints to innovation. Stenhouse discussed other kinds of constraints as well: the personal threat involved in studying one's own practice (1975, p. 159), the limited power of the individual as opposed to the co-ordinated group, and the need for external support, especially time and other resources. Yet his focus was primarily on both the need for teacher development and on the issue of "order" (p. 167).

It is important here to note that Stenhouse regarded the British context for educational work as quite distinct from that of the U.S. He noted and

rejected the attempts to devise "teacher-proof" curricula: "...it seems odd to attempt to minimize the most expensive resource in the school" (1975, p. 24). Instead he emphasized the autonomy of the British workplace, in which issues of course improvement, decisions about individuals, and administrative regulation lay "within the province of the teacher and the school" (p. 99). He contrasted this with the U.S.:

> In the United States the curriculum appears to be seen as a directive placed upon the teachers. Therefore, the question seems to be: 'Will it work?' In Britain, the curriculum is seen more as a tool in the hands of the teacher. The questions are: 'Can this curriculum offer something worthwhile?' and 'Am I as a teacher likely to be able to get the benefits out of it?' Since the teacher is to a great extent free to choose the curriculum, the evaluation must be addressed to him. And he trusts teacher judgment, which has more meaning to him than test results. (p. 105)

While the difference in the amount of teacher autonomy at the time is debatable, especially given Stenhouse's overall definition of curriculum, the difference in the questions asked in the two contexts seems to hold true.

In this discussion of the role of the teacher and the nature of the teacher's workplace, several factors are salient and important to subsequent discussion. First, the idea that consideration of questions of classroom order is important provides a vital element in understanding the nature of teachers' work as well as the constraints on changing it. Second, the issue of autonomy stands out. Although there is discussion of the importance of cooperation to educational change, the teacher, here, still seems to be making decisions, engaging in classroom practices, and conducting research without a sense of collectivity, beyond that of belonging to an "extended" profession. This latter point is quite significant. There is an emphasis placed on "professional self-development" through participation in educational research. Such an emphasis can

be seen in the work of the Ford Teaching Project, and is evident, as well, in IR & D and in the Deakin University works.

Self-Monitoring, Professionalism, and Critical Rationality

This section discusses some of the key aspects to the role of the teacher and the nature of the teacher's work and workplace in the Ford Teaching Project, IR & D efforts, and those of the Deakin University group. The point here, as in the previous sections is to look both what is included in and what gets left out of the discussion.

The Ford Teaching Project

The design for the Ford Teaching Project had its basis in the work of the Humanities Curriculum Project, which was directed by Lawrence Stenhouse. Both projects involved supporting teacher efforts to implement teaching strategies which would "give pupils greater independence from the teacher as a source of knowledge and more autonomy over his own learning" (Elliott & Adelman, 1973, p. 8). The work of the teacher, then, was one of facilitating or chairing open discussions and acting as a resource for student discoveries or inquiries. In two ways, this vision directly parallels the work of Corey and others at the Horace Mann-Lincoln Institute. First, there was an acceptance of teaching as a dynamic process of working toward desirable ends, rather than as a set of uniform, standardized practices. Although not explicitly "democratic" in its language, there was here also a clear sense that developing the capacity for autonomous action for both teachers and children was a major goal of the project. Inquiry/discovery "working" was a way to try to "Enter a Freer World", according to one of the teacher-researchers (Iredale, 1975). Elliott & Adelman saw this particular pedagogical innovation as one which "pose[d] fundamental

questions about the relationship between authority and freedom in education" (1975, p. 1).

While there is not a clear equating of teaching and research, the concept of "self-monitoring" within an action research framework bears a great deal of similarity to Corey's thoughts. Through the careful monitoring of their own actions and through student accounts, teachers could become more aware of both their intended and unintended effects and work toward "narrowing the gap" between their principles and their achievement (Elliott & Adelman, 1973). Such an awareness, too, was seen as a key element in furthering the teacher's "power to perform his role autonomously and responsibly" (p. 10).

This autonomy was seen to depend on three conditions: 1) "practical awareness" of future actions - what the teacher will or will not attempt to do, 2) "situational awareness" of a wide range of possibilities - discerning between actual and believed restrictions on choice, and 3) "self-awareness" of the potential relationship between the teacher and the situation - "of his tendency to influence his situation in certain ways":

> If the power to act autonomously is at least to some extent a necessary condition for teaching to take place, then there is a sense in which a concern for a truer understanding of situation and self - which not improperly could be described as a research attitude - is a latent if not manifest aspect of the teacher's role. (Elliott & Adelman, 1973, p. 11)

There were, within Ford T, efforts to provide support for the development of such autonomy. In these are embedded a vision of the workplace that would facilitate action research. These included work on "[c]reating the beginnings of a shared tradition of thinking about teaching..." (Elliott & Adelman, 1973, p. 12) and on monitoring children's accounts of teacher actions, but also on establishing a version of action research which avoided inflexible, pre-

specified learning outcomes. Instead, the emphasis was on establishing a version of action research which was a "dynamic rather than static" process (p. 16), so that new problems for shared consideration and study constantly emerge. While consensus, as in the earlier action research efforts in the United States, played a role, there was a difference:

> ...we hoped that our teachers would respect differences of view and not seek a false security in attempts to pressurize each other into an agreed pre-specification which if successful would only in the long run stifle the autonomy of the individuals involved. We see it as our responsibility to ensure that the autonomy of individuals is not sacrificed by a desire for consensus, and that consensus in practical awareness develops in a context where practical thought is not constricted. (Elliott & Adelman, 1973, p. 17)

Some of the hypotheses about developing "self-monitoring ability" within inquiry/discovery teaching, generated through the work of the Ford Teaching Project, outlined some additional concerns about the teacher's workplace, including the institutional structures that surround it. As in the earlier projects, there was a focus, though, on the psychological, including such factors as "self-esteem" and the relationship between "personal identity" and "professional role". Yet there were references to "financial and status rewards" and their connections to "administrative and pastoral roles", as well as explorations of the relationship between valuing oneself as a "potential researcher" and the experiencing of "tension between their accountability as educators for process-values and their accountability to society for knowledge outcomes (Elliott, 1976-1977).

Although these and other conditions such as the need for time and a reason for such reflection are mentioned by the project's director (Elliott, 1976-1977, p. 5), it is in some of the booklets produced by project teachers that the most fully developed picture of the teacher's workplace is to be found. As in the

post-war era, much effort seems to be focused on identifying the "conditions necessary for establishing and implementing research-based Inquiry/Discovery teaching" which they saw as "concerned mainly with the environment in which teaching takes place, with the people who form part of the institution, and with the facilities and resources which are available for the work" (Cooper, et al., 1975, p. 2). Interestingly especially because of its absence in many other of the action research writings, these teachers emphasized the need to adequately assess the environment before beginning a project:

> Obviously, schools or teachers contemplating the introduction of research-based Inquiry/Discovery teaching need to prepare thoroughly before embarking on such schemes, and this preparation should include an assessment of the institution and its personnel to ensure that, as far as possible, such teaching methods can be implemented successfully. (p. 2)

The preparations for research also included looking into the institutional environment. Here strong personal relationships between students and teachers, a "fair degree of freedom to pupils and teachers", a timetable that did not "unduly" dominate, sufficient resources, and effective channels of communication were seen to be very important (pp. 2-3). In addition, the Head needed to be both "sympathetic" to the project and "capable of providing a climate within the institution which will be helpful to the teachers involved". This included helping to ensure that the teachers' time was protected from "excessive demands", that materials and facilities were available, and that other staff, administration, and parents were informed about the project. It was also seen as important that the Head assist through "[b]eing able and willing to avoid exerting on staff undue pressure arising from the Head's preconceived ideas about education" (p. 3).

Cooper, et al. (1975), identified potential "constraints" on their efforts. They saw class size, money for resources, the timetable, and space as particularly important. They noted, too, the possibility that other people, perhaps due to ignorance or "conservatism" or fear, could exert pressure. But they also saw that the project teachers themselves could feel "threatened". Particularly important here for its parallel to Stenhouse's comments about order, was the "reaction of the pupils to their lessons" (p. 5).

> They may reject the experimental work because it may not fulfill their own or their parents' preconceived ideas of what school work should be. Their whole perception of the role of teachers, of curriculum content, and of teaching methods might be affected leading to lack of support for, or even antagonism towards, the teacher. (p. 6)

In addition to the problem of pupils' reactions, there was a recognition that the analysis of one's own lessons, the identification of inconsistencies between ideals and practices, could challenge teacher's training and beliefs and cause a loss in security. (p. 5)

An important extension to this analysis of constraints, beyond those recognizable as common to many earlier action research projects, is the inclusion of "constraints imposed by adults outside the institution". This category encompassed parents' attitudes, the concerns of officials and inspectors from the Local Education Authority, and effects of selection procedures, especially examinations (Cooper, et al., 1975, p. 6; Iredale, 1975, p. 21). This attention to the importance of considering structures outside the classroom and school context marks an important starting point for the discussion of workplace issues in action research.

In the work of the Ford Teaching Project, the key qualifier to the teacher is that of "self-monitoring". The teacher is to look carefully at and reflect

on his or her practices, in relationship to a set of principles. These principles are related to creating the opportunity for the students to exercise the maximum amount of freedom in and control over their own learning. The teacher "monitors", his or her practices, with the help of others, in the attempt to achieve the maximum congruency between her/his aspirations and practices.

As in earlier action research efforts, the consideration of workplace issues in largely framed in terms of "constraints" to realizing the new role for teachers. Issues of time, administrative support, and communication are focal points of the discussion. Present as well is an emphasis on the psychological factors affecting teachers' achievement of the goal of "self-monitoring". What is noteworthy is the way in which the reports, especially those by the teachers themselves, point toward the need to see the work and workplace issues in action research in terms of the larger social context in which they are enacted.

The Interactive Research and Development Projects

The three projects in the U.S. done in the late 1970's and early 1980's under the label of "Interactive Research & Development" signalled a re-emergence of action research into the larger U.S. educational research community. Responding to perceived inadequacies of the then prevalent linear research and development model, project leaders sought a way to encourage teachers toward greater usage of the results of research. Engaging with teachers in collaborative research "intended to resolve their problems", it was hoped, would reduce the time lapse "between the initiation of research and the use of its findings" (Tikunoff & Ward, 1983, pp. 454-5). Especially in the last of the

three projects, there was also a sense in which the projects were tied to a search for "factors that encourage job satisfaction" (Jacullo-Noto, 1984, p. 208).

The work of teaching, within the IR & D projects, does include some of the same characteristics present in other action research work, for example, "having a more reflective stance regarding practice" (Tikunoff, et al., 1979b. p. 424) or engaging in "informal inquiry" are seen as "characteristic of good teaching" (Tikunoff & Mergendoller, 1983, p. 217). Yet there are some important differences. First, because much of the IR & D work focused on teaching skills, as distinct from curriculum development, there is an implicit narrowing of the teacher's role that makes it difficult, if not impossible to unite practices with guiding curricular principles, an important feature of other projects. Second, perhaps because of the nature of some of the research itself, for example on "Coping with classroom distractions" (Behnke, et al., 1981), there is a clear view that teaching is a matter of discerning and acquiring a set of specific competencies or techniques, a position rejected by many of the earlier action researchers. Finally, there is a focus on the acquisition by teachers of research and development skills (Tikunoff, et al., 1979b, p. 454) as part of their "professional repertoire" (Tikunoff & Mergendoller, 1983, p. 226). There is a sense, though, that the focus seems to be less on teachers producing research and more on the likelihood that teachers would become more willing and able to be "consumers" of the research of others:

> Conducting research to inquire into and resolve instructional problems traditionally has not been perceived as a responsibility of classroom teachers. As a result, much of the educational research conducted to date has gone unused. One way to ensure the usefulness of research is to engage teachers in the research process. By joining a team with a researcher and a trainer/developer, teachers can not only help in the selection of questions to be studied. They also learn skills of inquiry which can aid them in examining and

> understanding their own teaching. At the same time, an interactive process of research and development ensures that appropriate procedures for utilizing the research will be developed concurrently with the conduct of the study. (Tikunoff & Mergendoller, 1983, pp. 226-227)

The workplace of the teacher in IR & D was considered to be one of "complexity". Participation in IR & D efforts was seen as resulting in an increased "awareness of educational options and possibilities within their own professional roles and daily functioning" (Tikunoff & Mergendoller, 1983, p. 221). It was claimed that IR & D work helped teachers gain an "increased understanding of school phenomena, as a system of interacting variables". This understanding included a "sharpened understanding of student differences, teacher preferences, system rules and policies, parental expectations, and curricular demands" (Griffin, et al., 1983, p. 60). The concern with awareness and understanding seems to parallel the ideas on the teachers' workplace contained in the discussion of "constraints" in earlier works. Yet these were seen as outcomes, not conditions, of teachers' research efforts.

The teachers' workplace was also seen as one of isolation. IR & D had an impact on the social relationships of teaching that could ameliorate this problem:

> Although self-contained classrooms and professional norms have historically been associated with teacher isolation, the teacher members of both IR & D teams related to one and to the researcher and trainer/developer in atypical ways. Systematic, focused, and interactive inquiry provided avenues for professional communication which had not formerly been part of their job experience. (Tikunoff & Mergendoller, 1983, p. 221)

To at least one of the participating teachers, Cindy Chase, those relationships were "considered by the team to be one of the most rewarding aspects to the study" (Tikunoff, et al., 1979a, p.35).

The issue of isolation came to be a focus on the psychological benefits of participation in IR & D. Participants in the projects were said to express increased confidence in their professional skills, and, as a result, to enjoy heightened self-esteem (e.g. Criffin, et al., 1983). It is interesting to note that the issue of self-esteem emerges here not as a "constraint" to innovation, but rather as an outcome of participation in research. In the Ford Teaching project and in others, self-esteem needed to be suspended; here its growth was seen as a reward.

In the work of the IR & D projects, they key term is "professionalism", defined to include the acquisition of the skills and attitudes of the researcher. Through careful study, for example, of practices related to classroom management, the teacher perfected a "knowledge base" of technical competencies. Such a knowledge base, along with research skills, helped to define the teacher as a true "professional".

There was an important emphasis on the reduction of isolation in the teacher's workplace through IR & D efforts. There was also a strong concern with a need for "work-load responsiveness" due to the time demands of research and for the calendars and cycles of the various institutions to match, but the discussions of issues of authority, resources, and autonomy found in other projects are not as apparent here. Rather the focus seems to be on the provision of opportunities for teachers to gain "reinforcement, recognition, and respect", through a new form of in-service education or staff development (Jacullo-Noto, 1984).

Action Research in Curriculum

The Action Research in Curriculum work at Deakin University in Australia provides yet another context for examining the work and workplace issues in action research. The Action Research Reader (Kemmis, et al., 1982) contains many reports from teachers' projects which are helpful in outlining an image of the work of teaching. As well, other materials (e.g. Carr & Kemmis, 1983) and other parts of the Reader add the voices presenting the views aspired to by the university-based researchers who worked with teachers. It is important to remember here that what was reported was not the result of discrete projects, such as in the Ford of IR & D efforts. Rather, the Reader is a compilation from a broad-based series of efforts in various locations, under various facilitators (See Grundy & Kemmis, 1982).

Teachers' projects included in the reader show a focus on pedagogical practices that clearly emphasize the development of student autonomy and the broadening of the base for educational planning. Reports describe implementing a "contract system" for learning (Creek, 1982), learning about how children can teach each other (Cormak, 1982), including parents, staff, and children in defining and solving playground behavior problems (Sweetman, 1982), and "negotiating education" (Reid, 1982), for examples.

In many ways, the teachers' comments on their work bear a close resemblance to some of the early works, especially those of Corey and the Horace Mann-Lincoln Institute. Seeing teaching as the facilitation of learning seems evident. For example, Rhonda Creek commented:

> The children now have much more control over their learning and this provides the motivation and enthusiasm to produce positive and satisfactory results...

> My role has changed by shifting towards me becoming a resource person supporting the children as they progress through their contract (1982, p. 110)

The involvement of children in the research process seems similar to the earlier search for the "democracy in the classroom" that Hopkins presented in the early 1950's:

> By involving children in the experiment and inviting them to join with me in investigating writing, I unwittingly removed one of the barriers to children improving their own work...
> By admitting that I too was a learner writer and then indicating some paths we could explore together, I gave the children power over their own learning. (Cormak, 1982, p. 116)

Several other facets of the works are also noteworthy. One is the lack of emphasis on the acquisition of a discrete set of teaching or research skills. Rather, a process of gradually defining and redefining both goals and practices with children and others in a particular situation is apparent. Although the idea that teachers were involved in curricular decisions is apparent, there was a frequent focus on the idea of "negotiation" of learning with children, parents, and others. Many projects seem to have been influenced by ideas such as those present in Garth Boomer's edited volume Negotiating the Curriculum (1982).

Finally, issues of "control" seem to have been integrated both with questions of pedagogy and curriculum. The children's reactions to lessons were not taken as a variable to control, but as an important data source for understanding the teaching-learning process. Children's behaviors, though, at least according to one writer, were also not to be accepted in a "laissez-faire" manner. Stressing that "the surroundings of the learner must be conducive to learning", Reid (1982) summarized:

> The question of a 'teacher who is a trusted adult, co-learner and senior curriculum planner', not just the disseminator of information, was one that struck me as very important...While I

> believe that curriculum negotiation has an important role to play in educating students to become independent (and on-going) learners, I feel it is important to stress here that there are some things that cannot be negotiated...It is the teacher's job to make these professional judgments. (p. 134)

On another issue similar to that raised by Corey, Grundy & Kemmis (1982) address the issue of whether teaching could be conceived of as research:

> It is often asked 'Don't all teachers do this anyway?' Certainly all teachers are involved in action and often in change, but their actions are often not strategies in that they act to change simply on the basis of perceptions rather than subjecting perception to the process of reflection (p. 89)

Given that qualification, it is important to ask, then, what kind of teacher would be involved in doing action research? Grundy & Kemmis respond:

> While it is taken that action research is adopted out of a desire to improve practice, in general facilitators report that experienced, innovative teachers form the bulk of their clientele. Inexperienced and less capable teachers do not tend to become involved in action research (p. 92).

From this comment, it would seem that this version of action research was not, at least then, conceived of as a pre-service educational experience, or one that could help the "less capable".

In the projects examined earlier in this paper, issues of the teachers' workplace in action research focused on the structure of teachers's work, including time, authority, and communication, the nature of administrative support, the influence of the context outside of the school, as well as the functioning of personal and professional relationships. In addition, the individual person's responses - gains or losses in self-esteem or confidence, improved status or security, feelings of "reward" or "reinforcement, recognition, and respect", were seen to play vital role, sometimes as a facilitating factor in, and sometimes as an outcome of engaging in action

research. In the work at Deakin, too, some of these issues emerge, albeit in different ways.

One of the most interesting aspect of the project reports included in the Reader is the scarcity of comments about the lack of time, support, freedom to innovate or constraints from outside the classroom that were so common in other projects. Although a few teachers seemed cautious about parent reaction, they also seemed to initiate communication and ideas about their projects. Instead, the teacher reports highlight the origins of their projects in their feelings of dissatisfaction with current practices and often reflect new ideas gained from participation in workshops. Helen Campagne's comments are particularly relevant here.

> I think many of us had arrived at a belief that any effective experimentation and change in curriculum - the learning occurring in our classrooms - could only come about if we were committed to actual and sincere participation ourselves...We were looking for ways of drawing up informed and justifiable plans of action which would enable us to change our practice so that the children we taught and ourselves, benefitted. (1982, p. 150)

Campagne's article is also one of the few places in teacher documents where factors affecting the teachers' taking on changes were discussed. The first factor was a need to have teachers in touch with research and theory, but in such a way as to make theory and practice have a "workable relationship" - one "that has both intellectual and professional honesty and paths to practical applicability". Second was the need for "support structures" whereby others encourage and help with the risks taken in changing and studying one's own practices (Campagne, 1982, p. 150).

In the writings of the university-based researchers a different exploration of the workplace issues can be found. Grundy & Kemmis (1982), for example, identify several other issues. First, they stress the need for

> "a special kind of communication which recognizes the authentic knowledge of group members, recognizes distinctive points of view, and engages them with practical and political deliberation about practice (with corresponding political consciousness). (p. 87)

While "communication" was a frequent topic in many of the action research efforts, the concept here is quite different from the emphasis on "consensus" or shared expertise discussed earlier. The recognition of the diversity of views and the connections of practical action and political awareness are also salient features.

Connected to the issue of communication is the issue of power. Rather than deferring to the authority of science, the focus is clearly on empowerment:

> ...where the intention is genuinely to improve practice, real and significant change can and does occur. One of the underlying reasons for the significance of the change...is the shift in power that occurs through the operation of the action research process. Not only is the teacher empowered in controlling the process of change, but the consultation which inevitably occurs between teachers or between the teacher and his or her pupils often empowers those others as well. (Grundy & Kemmis, 1982, p. 93)

Finally, there is a different articulation of the issue of resources. It was emphasized that participation in action research required a great deal c time and commitment. There were two ways in which this problem was to be addressed. First, there needed to be a recognition that:

> It is a mistake to think of action research as research 'on the cheap'. It involves considerable amounts of time and energy for already busy practitioners. Teachers' time is the most valuable commodity in education; and time is the most expensive commodity in educational research. (Grundy & Kemmis, p. 94)

Second, a changes in the form of the research methods was seen as necessary: "techniques need to be made accessible to practitioners so that action research can be carried out with the least possible disturbance to practice itself" (p. 94).

One of the goals of engaging in action research, according to the Deakin group, is the development of a rationale for one's practices. This focus on rationality, seen as "critical", rather than "practical" or "technical", forms a basis for the definition of the teacher. Yet tied to this was a perceived need to be responsive to the conditions of teachers's workplace - both internal and external:

> The criteria of rational discourse, authentic enlightenment, and free commitment to wise and prudent decision making (by which the self-critical processes of action research may be judged...) could well be taken as an educational credo. Research is needed to establish whether and when group decision making processes in action research live up to this promise, and how the conditions can be created for further progress toward achieving the promise in performance. (Grundy & Kemmis, 1982, p. 95)

Rather than seeing "group dynamics" as the answer to problems of authority and communication, the point here is that these, too, must be researched if the goal of empowerment is to be achieved. This point seems to be one which teacher educators involved in action research efforts ought well to pursue.

For anyone sensitive to "non-sexist" language, the title of this section should have raised eyebrows. Throughout this paper, I have retained the language of the original text, as Stenhouse did, with apology and explanation, in a collection of his works (1983). I do so, not only because, as Stenhouse said, "...I have thought it important not to revise them given this historical perspective" (p. vii), but also because the altering of a few pronouns, while an important symbolic and discursive event, does not alter the power relations they embody. The issue of gender in action research, especially as it relates to the nature of knowledge, knowledge production, and the work of teaching has thus far been an unexamined question in the literature. The paper has hinted at

this dimension, with the initial quotes from Thorndike, with references to the teacher as "mother", and with mentioning the relationship of commitment to the students in the classroom. But overall, the issue has not been directly addressed. The final section of the paper will summarize the work and workplace issues that have emerged from this historical analysis and discuss them in terms of their implications for efforts to determine whether, what kind of, and how action research might play a role in teacher education. Finally, the issues that have emerged, though, have implications, too, for our general understanding of teaching as a labor process - both as work and as taking place within a workplace. I will present the beginnings of an exploration of another way to think through issues of the work and workplace of teaching within action research, one which draws on the notion of teaching as "gendered labor" (Apple, 1986). Such a form of analysis hold out the possibility of understanding better the contradictions involved in action research by and with teachers.

"Not a change of heart"

The title of this section comes again from the writings of Lawrence Stenhouse. In discussing the barriers to the full realization of the teacher as researcher, he identified and discussed the process of change:

> All this points to the difficulty of change; but it also points to the need for change. I think it further suggests that it is not a simple change of heart that is needed in schools. It is a change of organization and pedagogy which is founded on a development of the professional skills and knowledge of teachers. Morale is founded on professionalism. (1975, p. 167).

In this study, a number of aspects related to understanding the work of teaching and the workplace in which it takes place have been identified. Definitions of teaching have ranged from a close identification of teaching with

research - a "dynamic process", to those who view it as carrying out of a set of skills - learned in part by attending to research results. Teach s have been described as "key persons" in curriculum development, facilitators of learning, and ones who use the methods of science to create democracy in the classroom. They have also been referred to as "learners of professional skills" including those of research, as members of "critical communities", as "self-monitoring", and as "extended professionals". One of the key factors that needs to be involved in assessing t e merits of using action research in teacher education is the degree of clarity in the vision of teachers and their work. Questions that need to be addressed include those of the breadth of the vision and the purposes it serves.

A example from the U.S. context will serve to explain why this is important. The resurgence of action research efforts in the U.S. can be seen to have come on the heels of major efforts to "deskill" the work of teachers (Apple, 1986). Its current context remains one in which efforts to erode the control of teachers over their work continue, albeit in a different form. The early action research era included a great emphasis on the teacher as a major figure in curriculum development, curriculum of a particularly "progressive" kind. In some ways, the IR & D efforts could be seen as a way to pull teachers away from issues of control of the curriculum, and away from seeing the interrelatedness of curriculum, pedagogy, and "management". Teachers are "reskilled" but not "empowered". If we are to advocate action research efforts with pre- or in-service teachers, we must first be clear what political agenda our efforts might match.

Another set of issues arose from the study of the teachers' workplace. Here power was a much more salient factor. Taken together with the work of

Stenhouse, the central workplace issues in the projects reviewed are those of resources, authority and communication. These issues point toward the needed reforms or changes both in the role of the teacher and in the nature of the workplace which would facilitate those goals. The variations on these issues echo many of the concerns already raised in the U.S. action research efforts of the 1950's. There are several important things to consider here. One is the way that the personal and social significance of action research intermingle. The "authority" of science gives not only self-esteem and self-confidence to teachers, it also serves to depoliticize educational discourse, deferring decisions to "experts". Second, the emphasis on personal relationships not only serves to improve communication, it also serves to alleviate for some teachers a structural condition of teachers' work which might otherwise be addressed for all.

Finally, a great deal of caution must be exerted in evaluating efforts to institutionalize action research in teacher education. Here, again, an example from the U.S. context will serve to clarify the issue. In an era of heightened efforts to "professionalize" teaching, care must be taken to ensure that the model of "professional" is indeed one which applies to work which involves the caring and nurturing of children. Clark & Lange (1979) offer an analysis of the course of feminism which has particular significance to this issue:

> Feminism has for the most part taken the form of demanding to be let into...the productive sphere, from...the reproductive sphere. This is an important goal. But if our analysis of the two forms of labour needed for the existence of society is correct, it is clear that this can be a solution for no more than a few isolated individuals, so long as the unique liability of women as a group to perform this reproductive labour remains. Economic and social pressure on women to do this work, and to do it as an act of love or duty rather than of social labour, will continue to be relentless unless and until its organization is fundamentally altered to become democratically share by all units in society. (1979, pp. xvi-xvii)

If one reads in "teachers" for "women", which is not an unreasonable reading, and "advocacy for teachers' involvement in research" for "feminism", one begins to see how the visions of the role of the teacher and the nature of the teachers' workplace could be skewed toward a vision of "professionalism" and "rationality" and have not, therefore, been able to adequately consider the dual nature of teachers' labor. Without careful attention to the burden action research places on teachers, and the way it might, in some forms, seriously undermine many teachers' concern with an "ethic of caring" (Noddings, 1984), it could lead to an improved status for some teachers - the creation of yet another hierarchy in education, or a form of labor intensification - increased expectations without job restructuring, for most teachers.

This last section of the paper has but raised the beginnings of serious questions about the use of action research with pre- and in-service teacher education. These questions are raised, though, by a "critical friend" of action research. The question of "whether" to engage in action research with teachers is seen as contingent upon how well we can resolve some of the issues inherent in its practice within the work and workplace of teaching. Such a resolution depends on developing the same "questioning attitude" in ourselves as teacher educators as we would have in teachers. We need to take a phase from our colleagues who work in "feminist research" (e.g. Harding, 1987), and engage in "critically" studying ourselves - the images of the work and workplace of teaching we, all too often tacitly wish to promote, as we engage in studying the research attempts of others.

REFERENCES

Apple, Michael W. (1986). Teachers and texts. New York: Routledge and Kegan Paul.

Behnke, Grant; Labovitz, Eugene M.; Bennett, Janice; Chase, Cindy; Day, Jane; Lazar, Charlotte; & Mittleholtz, David. (1981). Coping with classroom distractions. Elementary School Journal, 41(3), 135-155.

Boomer, Garth. (1982). Negotiating the curriculum: A teacher-student partnership. Sydney: Ashton Scholastic.

Campagne, Helen. (1982). I changed - This is how. In Stephen Kemmis, et al., The action research reader (Rev. Ed.) (pp. 148-150). Geelong: Deakin University Press.

Carr, Wilfred & Kemmis, Stephen. (1983). Becoming critical: Knowing through action research. Geelong: Deakin University Press.

Carter, Paul; Harden, Mary; and Nesbitt, Daniel. (1954, May). The classroom teacher and action research. Educational Leadership, 11(8), 465-470.

Caswell, Hollis. (1950, April). Research in the curriculum. Educational Leadership, 7(7), 438-445.

Clark, Lorenne M.G. & Lange, Linda. (1979). Introduction. In Lorenne M.G. Clark & Linda Lange, The sexism of social and political theory: Women and reproduction form Plato to Nietzsche (pp. viii-xvii). Toronto: University of Toronto Press.

Cooper, Donald; Barrett, Douglas; Hayhoe, Mike; Hobrough, Roz; Rowe, Mike; and Rumsby, Anne. (1975). Support for research-based inquiry/discovery teaching. Cambridge: Cambridge Institute of Education.

Cooperative research and curriculum improvement. (1950, April). Teachers College Record, 51(7), 407-474.

Corey, Stephen M. (1950, Feb.). Teachers as investigators. Progressive Education, 27(4), 131-132.

Corey, Stephen M. (1953a). Action research to improve school practices. New York: Teachers College.

Corey, Stephen M. (1953b, Oct.). A perspective on educational research. Phi Delta Kappan, 35(1), 21-24.

Corey, Stephen M. (1954a, Jan.). Hoping? Or beginning to know! Childhood Education, 30(5), 208-211.

Corey, Stephen M. (1954b, Feb.). Action research and the classroom teacher. NEA Journal, 43(2), 79-80.

Corey, Stephen M. (1955). Implications of cooperative-action research for teacher education. In American Association of Colleges of Teacher Education, Yearbook (pp. 164-172).

Cormak, Phil. (1982). A classroom experiment: Conferencing to improve children;s writing. In Stephen Kemmis, et al., The action research reader (Rev. Ed.) (pp. 113-116). Geelong: Deakin University Press.

Creek, Rhonda. (1982). Implementing a 'contract system' using action research. In Stephen Kemmis, et al., The action research reader (Rev. Ed.) (pp. 106-112). Geelong: Deakin University Press.

Cunningham, Ruth & Miel, Alice. (1947, Jan.). Frontiers of educational research in elementary school curriculum development. Journal of Educational Research, 40(5), 365-372.

Elliott, John. (1976-1977). Developing hypotheses about classrooms from teachers' practical constructs: An account of the work of the Ford Teaching Project. Interchange, 7(2), 2-22.

Elliott, John & Adelman, Clem. (1973). Reflecting where the action is: The design of the Ford Teaching Project. Education for Teaching, 92, 8-20.

Elliott, John & Adelman, Clem. (1975). Classroom action research. Cambridge: Ford Teaching Project, Cambridge Institute of Education.

Goodson, Max R. (1946, Oct.). Charting a course for educational progress. Teachers College Record, 48(1), 35-60.

Griffin, Gary; Liebermann, Ann; & Jacullo-Noto, Joann. (1983, April). Interactive research and development on schooling: Executive summary of the final report. Austin: Research and Development Center for Teacher Education.

Grundy, Shirley & Kemmis, Stephen M. (1982). Educational action research in Australia: The state of the art (An overview). In Stephen Kemmis, et al., The action research reader (Rev. Ed.) (pp. 83-97). Geelong: Deakin University Press.

Harding, Sandra. (Ed.). (1987). Feminism and methodology: Social science issues. Bloomington: Indiana University Press.

Hopkins, L. Thomas. (1950, March). Dynamics in research. Teachers College Record, 51(6), 339-346.

Horace Mann-Lincoln Institute of School Experimentation Staff. (1948, Feb.). A progress report. Teachers College Record, 49(5), 305-362.

Horace Mann-Lincoln Study Group. (1948, Nov.). Recommended: Group research for teachers. Teachers College Record, 50(2), 108-113.

Iredale, Brian. (1975). A third-year form tries to enter a freer world: Research into ways toward inquiry/discovery working. Cambridge: Cambridge Institute of Education.

Jacullo-Noto, Joann. (1984, Fall). Interactive research and development - Partners in craft. Teachers College Record, 86(1), 208-222.

Kemmis, Stephen, et al. (1982). The action research reader (Rev. Ed.). Geelong: Deakin University Press.

Kemmis, Stephen & McTaggart, Robin. (1982). The action research planner (Rev.). Geelong: Deakin University Press.

Mackenzie, Gordon N. (1947, Jan.). Frontiers in educational research in secondary school curriculum building. Journal of Educational Research, 40(5), 356-364.

Noddings, Nel. (1986). Caring: A feminine approach to ethics and moral education. Berkeley: University of California Press.

Noffke, Susan E. (1989, March). The social context of action research: A comparative and historical analysis. Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco.

Reid, Jo Anne. (1982). Negotiating education. In Stephen Kemmis, et al., The action research reader (Rev. Ed.) (pp. 127-134). Geelong: Deakin University Press.

Rucker, D.C. & Pittman, Alice. (1949, Dec.). Action research means cooperation, from the viewpoint of the school supervisors. Educational Leadership, 7(3), 164-166.

Shumsky, Abraham. (1958, Oct.). The personal significance of action research. Journal of Teacher Education, 9(2), 152-155.

Shumsky, Abraham. (1959). Learning about learning from action research. In Learning and the teacher (pp. 183-192). Washington, D.C.: Association for Supervision and Curriculum Development.

Shumsky, Abraham. (1962, Nov.). The subjective experience of the researcher. Journal of Educational Sociology, 36(3), 134-138.

Shumsky, Abraham & Mukerji, Rose. (1962, Nov.). From research idea to classroom practice. Elementary School Journal, 63(2), 83-86.

Stenhouse, Lawrence. (1975). An introduction to curriculum research and development. London: Heinemann.

Stenhouse, Lawrence. (1983). Authority, education and emancipation. London: Heinemann.

Sweetman, Susan. (1982). Problems in the playground. In Stephen Kemmis, et al., The action research reader (Rev. Ed.) (pp. 120-122). Geelong: Deakin University Press.

Taba, Hilda. (1957). Problem identification. In Research for curriculum improvement (pp. 42-71). Washington, D.C.: Association for Supervision and Curriculum Development.

Taba, Hilda & Noel, Elizabeth. (1957). Action research: A case study. Washington, D.C.: Association for Supervision and Curriculum Development (NEA).

Taba, Hilda; Noel, Elizabeth; & Marsh, Jack. (1955, May). Action research as a technique of supervision. Educational Leadership, 12(8), 453-458.

Thorndike, Edward L. (1906). The principles of teaching based on psychology. N.Y.: A.G. Seiler.

Thorndike, Edward L. (1912). Education. N.Y.: Macmillan & Co.

Tikunoff, William J. & Mergendoller, John R. (1983). Inquiry as a means to professional growth: The teacher as researcher. In Gary Griffin, (Ed.). Staff Development, 82nd Yearbook of the National Society for the Study of Education, Part II (pp. 210-227). Chicago: NSSE.

Tikunoff, William J. & Ward, Beatrice A. (1983, March). Collaborative research on teaching. Elementary School Journal, 83(4), 453-468.

Tikunoff, William J.; Ward, Beatrice A.; Behnke, Grant H.; Chase, Cindy; Griffin, Gary; Evertson, Carolyn; and Kennedy, G. Charlette. (1979a, April). Interactive research and development on teaching: An overview of the strategy. Symposium presented at the annual meeting of the American Educational Research Association, San Francisco. (ED 175843)

Tikunoff, William J.; Ward, Beatrice A.; & Griffin, Gary A. (1979b). Interactive research and development on teaching: Final report. San Francisco: Far West Laboratory for Educational Research and Development. (ED 186385)

Wiles, Kimball. (1953). Can we sharpen the concept of action research? Educational Leadership, 9, 408-410+.

Wood, Patricia. (1988, April). Action research: A field perspective. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans.